

Abstract of the Disclosure

This invention relates to a signal processing method and apparatus to enhance demodulation performance of receiving system utilizing the array antenna operating in various CDMA signal environments such as IS95 CDMA system, or IS2000 1x CDMA system, etc. The method improves the demodulation performance by applying the weight vector, which is computed in a signal processing means of a CDMA system adopting the array antenna, to the signal vectors of an Walsh demodulation outputs. The key part of the invention is in the composite procedures of finding the index D of the Walsh demodulation outputs, which corresponds to the 6-bit data transmitted from mobile terminal. More specifically, the invention provides a systematic way of applying the weight vector to each of the 64 Walsh demodulation outputs such that one index out of the 64 indices corresponding to the largest magnitude. Also the invention discloses how to compute the weight vector from received signals.